Cover Crops in Reduced Till Organic Systems

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Weed coverage in soybean as affected by cereal rye biomass

Cereal Rye Biomass Levels (lb ac\(^{-1}\))

Goldsboro
Kinston
Kinston
Plymouth*
Goldsboro
Plymouth*

LOW
<6,000

MED
<6-8,000

HIGH
>8,000

Weed Coverage (%)
High-residue cultivation: Post-emergence
Corn has problems

- What should the cover crop be?
  - Grass
  - Legume
  - Mix
Corn has problems

• What should the cover crop be?
  – Grass- nitrogen problem
  – Legume
  – Mix
Corn has problems

• What should the cover crop be?
  – Grass- nitrogen problem
  – Legume – biomass problem
  – Mix
Corn has problems

• What should the cover crop be?
  – Grass- nitrogen problem
  – Legume – biomass problem
  – Mix – hard to plant into unless clover/grass mix
New Directions
Soil moisture as affected by cover crop treatment averaged over herbicide treatment averaged over 5 environments.
Figure 1. Total biomass as affected by legume genotype and small grain in a combined analysis of the Coastal Plain environments (Clayton 2016, Clayton 2017, Kinston 2016, Rocky Mount 2017).